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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,978	10/05/2005	Thomas Vogel	SE/21-22871/A/PCT	3473
324 7590 10/08/2008				
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EXAMINER				
CHIANG, TIMOTHY S				
ART UNIT		PAPER NUMBER		
4131				
MAIL DATE		DELIVERY MODE		
10/08/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/551,978

**Applicant(s)**

VOGEL ET AL.

**Examiner**

TIMOTHY CHIANG

**Art Unit**

4131

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01/09/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-15 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 1/09/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-7, 10-15, drawn to polymerisable compound and compositions comprising polymerisable compound.

Group II, claim(s) 8-9, drawn to 1,4-diazabicyclo[2.2.2]octane compounds independent of polymerisable compound of claim 1.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature in all groups is the chemical structure of claim 1, formula (I). This element cannot be a special technical feature under PCT Rule 13.2 because the element lacks novelty and is shown in the prior art. Mühlebach et al. (WO 00/40630) in view of Valet et al. (U.S. Patent 5,198,498) discloses a composition comprising an initiator fragment, terminal group, and two polymer blocks of higher and lower polarity alkylated esters and a light stabilizing co-polymer as disclosed in claims 1-7 and further

indicates that this compound is used in conjunction with organic or inorganic pigment compositions.

2. During a telephone conversation with Joseph C. Suhadolnik on 9/22/2008 a provisional election was made without traverse to prosecute the invention of group I, claims 1-7, 10-15. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-9 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

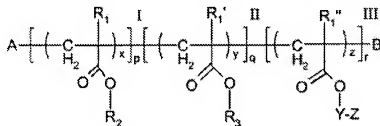
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-7, 10-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Mühlebach et al. (WO 00/40630 hereinafter, "Mühlebach") in view of Valet et al. (U.S. Patent 5,198,498 hereinafter, Valet).

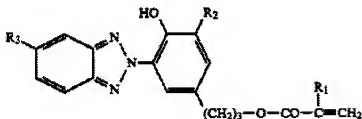
Mühlebach discloses a composition which comprises a polymerisable compound comprising an initiator fragment, terminal group, and two polymer blocks of higher and lower polarity alkylated esters (page 3, formula (I) of Mühlebach). Furthermore, Mühlebach teaches that the macromonomer may be polymerized to form comb polymers with the number of repeating units greater than one, including two.

Mühlebach differs from the present claims in that the structure disclosed does not feature a light protecting functional group on the polymer backbone. The present application discloses the following polymerisable:



with polymer block III featuring Y-Z, a functional group with light protecting properties joined by a direct bond or a bivalent group. Mühlebach teaches a structure featuring polymer blocks I and II but not III.

Valet's teaching pertains to light-stabilized binders and discloses several co-polymerisable 2-(2'-hydroxyphenyl)benzotriazol-derived compounds for UV absorption. One such compound has the same structure as polymer block III of the instant claim:



Where R1, R2, and R3 may be Hydrogen (see column 2 & 3 of Valet). The structure equates to the polymer block III of the instant claim where Z is 2-(2'-hydroxyphenyl)benzotriazol and Y is C<sub>2</sub> alkyl.

Mühlebach's teaching combined with the co-polymerisable 2-(2'-hydroxyphenyl)benzotriazol-derived compound of Valet's teaching encompasses the polymerisate structure of the instant claim in its entirety.

Mühlebach further teaches the desirability of adding UV-absorbing properties to compositions featuring taught comb polymers. Mühlebach specifically states that the addition of 2-(2'-hydroxyphenyl)benzotriazol would benefit polymer functionality in deterring light degradation of products (see page 18 of Mühlebach). Free radical polymerization such as Atomic Transfer Radical Polymerization or ATRP (see page 15, paragraph 4 of Mühlebach ) would make it possible to join the UV-absorbing co-polymerisable 2-(2'-hydroxyphenyl)benzotriazol-derived compound of Valet's teaching at the non-cyclic carbon-carbon double bond to the polymer backbone of Mühlebach's macromonomer.

Therefore it would be obvious to one of ordinary skill in the art at the time of the invention was made to co-polymerize a 2-(2'-hydroxyphenyl)benzotriazol compound to

macromonomers such as found in the teaching of Mühlebach to obtain comb polymers with intrinsic UV protecting properties.

The recitations of instant claims 2-5 can be found in the reference at page 8, page 10 – paragraph 8, and pages 48-51 – claims 1, 2, 4, 5, and 6 of Mühlebach.

The recitations of instant claim 10 can be found in the reference at page 19 – paragraph 5 of Mühlebach.

The recitations of instant claim 11 can be found in the reference at page 51 – claim 7 of Mühlebach.

The recitations of instant claim 12 can be found in the reference at page 51 – claim 10 of Mühlebach.

The recitations of instant claims 13-15 can be found in the reference at page 14 of Mühlebach.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY CHIANG whose telephone number is (571)270-7348. The examiner can normally be reached on Monday - Thursday 9:00AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 5712721376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner  
Art Unit 4131

/TIMOTHY CHIANG/  
Examiner, Art Unit 4131